

REMARKS

Applicant respectfully requests reconsideration and withdrawal of the outstanding Office Action rejections based on the following remarks.

Response to Provisional Obviousness-type Double Patenting Rejections

Claims 1-3, 7-9, 11, 12, 14, 17-21, 24, and 25 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 8, 13, 14, and 20 of copending Application No. 11/868,155 ('155) in view of U.S. Publication 2003/0005722 (Wilkinson). Claims 4 and 22 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 11/868,155 ('155) in view of U.S. Publication 2003/0005722 (Wilkinson) and further in view of U.S. Publication 2003/0005698 (Keller). Claim 6 was provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 11/868,155 ('155) in view of U.S. Publication 2003/0005722 (Wilkinson) and further in view of U.S. 6,564,579 (McCartney). Claims 5, 10, 15, and 16 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over the combination of U.S. Publication 2003/0005722 (Wilkinson) and claim 1 of copending Application No. 11/868,155 ('155) in view of U.S. Publication 2003/0014995 (Bowen). Claim 13 was provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over the

combination of U.S. Publication 2003/0005722 (Wilkinson) and claim 1 of copending Application No. 11/868,155 ('155) in view of an article by Chen et al. published in the journal Cryogenics in 2004. Applicant respectfully requests that all provisional rejections on grounds of double patenting be held in abeyance until such claims have been indicated to be allowable and it becomes possible to determine whether claims directed to the same invention or an obvious variant thereof would be issued in more than one patent.

Response to Rejections under 35 U.S.C. § 103

Claims 1-3, 5, 7-12, 14-21, 24 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilkinson (U.S. Publication 2003/0005722) and further in view of Sun (U.S. 6,607,597) and Bowen (U.S. Publication 2003/0014995). The Office contends that Wilkinson discloses a method for splitting a natural gas input stream into two feed columns (34 and 36), expansion and vaporization of feed columns via valve 14 and expansion machine 15, fractionation of feeds (39a, 35b, 40a, and 36a) with fractionation unit 19 to yield overhead product 37, compression of overhead product by compressor 16, condensation of overhead product stream via cross-exchangers 24 and 60, direction of a reflux stream of overhead product via a pump (23) to the top of a fractionation after passing through a reflux drum (22). The Office acknowledges that Wilkinson fails to disclose splitting and mixing a bypass stream with a balance of overhead product. However, the Office Action states that Sun discloses a method for splitting and mixing a balance of input gas for a flow controller to permit dynamic adjustment of output fluid characteristics. The Office Action asserts that it would have been obvious to include flow bypass and mixing in the method of Wilkinson to permit adjustment of the overhead product stream composition.

Further, the Office asserts that the combination of Wilkinson and Sun “teaches” the cooling of the inlet stream in addition to the cooling and condensation of overhead product stream. The Office acknowledges that the combination of Wilkinson and Sun does not disclose heating of an inlet stream of LNG.

The Office Action states that Bowen discloses gradual heating of an inlet LNG stream via a pump, heater, and heat exchanger to obtain the desired feed gas temperature. The Office contends that it would have been obvious to include LNG heating methods in the LNG separation method purportedly suggested by the combination of Wilkinson and Sun. Applicant respectfully disagrees and traverses the rejection.

The presently claimed invention is directed to a method for recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas. Claim 1 recites the steps of receiving an input stream comprising substantially rich liquefied natural gas; splitting the input stream into a direct stream and a bypass stream; heating said direct stream in a cross-exchanger to produce a stream of heated rich liquefied natural gas; splitting said heated rich liquefied natural gas into a primary column feed and a secondary column feed; vaporizing at least a major portion of said secondary column feed in a vaporizer to produce a vaporized secondary column feed; fractionating a top feed, said primary column feed, and said vaporized secondary column feed in a fractionation unit to produce an overhead product stream and a bottom product stream; condensing at least a major portion of said overhead product stream by cooling said overhead product stream in said cross-exchanger to produce a condensed overhead product stream; pumping a reflux portion of said condensed overhead product stream to a top of said fractionation unit as said top feed; mixing said bypass stream with a balance portion of said condensed overhead product stream to produce an output

stream; and vaporizing said output stream to produce a conditioned natural gas suitable for delivery to a pipeline or for commercial use.

Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose the aforementioned steps and/or features of claim 1, for at least the following reasons.

When determining whether a claim is obvious, the Office must make “a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, “obviousness requires a suggestion of all limitations in a claim.” *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (*citing In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, the Supreme Court has clearly held that “*there must be some articulated reasoning* with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The failure of an asserted combination to teach or suggest each and every feature of a claim is fatal to an obviousness rejection under 35 U.S.C. § 103.

In analyzing the invention as a whole, one must consider all the limitations of the claims rather than merely the “gist” of the invention. See M.P.E.P. §§ 2141.02 (II), 2143.03; *W.L. Gore & Assoc., Inc. v. Gadock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983), cert. den. 469 U.S. 851 (1984); see also *Bausch & Lomb v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 447-449 (Fed. Cir. 1986), cert. den., 484 U.S. 823 (1987). M.P.E.P. §

2141.02(V) provides that “it is [the] invention *as a whole*, and not some part of it, which must be obvious under 35 U.S.C. § 103.” (quoting *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977) (emphasis in original) (citations omitted)).

The Supreme Court established the appropriate analysis and standards for analyzing obviousness: a patent shall be invalid if “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416. “[A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 417. “[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). There must be some reason to combine the prior art in the way embodied by the patent; some motivation or incentive is needed. *Id.*

Wilkinson is directed to the treatment of a **gaseous** feed stream whereas the present invention relates to the recovery of components from a liquid feed stream. Accordingly, there is a fundamental difference between the method and apparatus of Wilkinson and the presently claimed invention. Wilkinson is directed to the treatment of a gaseous feed stream, which received at high pressure and ambient temperature. See paragraph [0033] of Wilkinson. In contrast, the present invention is directed to an apparatus and method for recovery of **liquefied** petroleum gas or natural gas **liquids** from **liquefied natural gas**, which is received in a liquid state at cryogenic temperatures

and atmospheric pressure. Because of this fundamental difference, Wilkinson does not relate to the claimed method or apparatus.

Specifically, Wilkinson does not disclose, *inter alia*, receiving an input stream comprising substantially rich *liquefied* natural gas, splitting the input stream into a direct stream and a bypass stream, heating said direct stream in a cross-exchanger to produce a stream of heated rich *liquefied* natural gas, or splitting said heated rich *liquefied* natural gas into a primary column feed and a secondary column feed as recited in claim 1. Further, the Office has already acknowledged that Wilkinson does not disclose or suggest the steps of splitting and mixing a bypass stream with a balance of overhead product stream to produce an output stream. Wilkinson also fails to disclose or suggest the steps of diverting a portion of the heated rich liquefied natural gas into an optional bypass stream **and** mixing the optional bypass stream with the balance portion of the condensed overhead product stream to produce the output stream, as recited in claim 2, which depends from independent claim 1.

Similarly, Wilkinson fails to disclose or suggest an apparatus for recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas. This is because Wilkinson is drawn to an apparatus for “the liquefaction of a natural gas stream.” See, e.g., claim 41 of Wilkinson. Accordingly, Wilkinson fails to disclose or suggest an apparatus recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas having, *inter alia*, a diverter for splitting an input stream comprising substantially rich liquefied natural gas into a direct stream and a bypass stream, a diverter for splitting said heated rich liquefied natural gas into said primary column feed,

optional bypass stream and a secondary column feed, as recited in independent claim 17.

Further, Wilkinson fails to disclose or suggest a system for recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas. This is because Wilkinson is drawn to liquefaction of a *gaseous* natural gas stream. Accordingly, Wilkinson fails to disclose or suggest a system for recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas having, *inter alia*, means for receiving an input stream comprising substantially rich liquefied natural gas, means for splitting the input stream into a direct stream and a bypass stream, and means for splitting said heated rich liquefied natural gas into a primary column feed and a secondary column feed, as recited in independent claim 24.

Moreover, Wilkinson also fails to disclose or suggest “vaporizing at least a major portion of said secondary column feed in a vaporizer to produce a vaporized secondary column feed” as recited in claim 1, “a vaporizer for vaporizing at least a major portion of said secondary column feed and producing a vaporized secondary column feed” and “a mixer for mixing a bypass portion of said rich liquefied natural gas and optional bypass stream with a balance portion of said overhead product stream to produce an output stream” as recited in claim 17, or “means for vaporizing at least a major portion of said secondary column feed to produce a vaporized secondary column feed,” and “means for mixing a bypass portion of said rich liquefied natural gas with a balance portion of said condensed overhead product stream to produce an output stream,” as recited in claim 24.

Bearing in mind that Wilkinson is not related to the presently claimed method, apparatus, and system, Applicant submits that Sun fails to remedy the above-noted deficiencies of independent claims 1, 17 and 24. In fact, Sun has nothing to do with the claims of the present application. Sun relates to a system for depositing particles on surfaces such as semiconductor wafers, see *e.g.*, col. 1, lines 49-50, and not to recovering liquefied petroleum gas or natural gas liquids from liquefied natural gas. The Office Action states that Sun discloses the step of splitting and mixing a balance of input gas for a flow controller. Applicants submit that Sun does not disclose, *inter alia*, the step of splitting an input stream comprising substantially rich **liquefied** natural gas into a direct stream and a bypass stream or the step of mixing said bypass stream with a balance portion of said condensed overhead product stream to produce said output stream, as recited in claim 1. Sun also fails to disclose or suggest the steps of diverting a portion of the heated rich liquefied natural gas into an optional bypass stream **and** mixing the optional bypass stream with the balance portion of the condensed overhead product stream to produce the output stream, as recited in claim 2, which depends from independent claim 1. Further, Sun does not disclose or suggest, *inter alia*, a diverter for splitting an input stream comprising substantially rich **liquefied** natural gas into a direct stream and a bypass stream or a mixer for mixing a bypass portion of said rich liquefied natural gas and optional bypass stream with a balance portion of said overhead product stream to produce an output stream as recited in independent claim 17. Sun also does not disclose or suggest, *inter alia*, means for splitting the rich liquefied natural gas input stream into a direct stream and a bypass stream or means for mixing a bypass portion

of said rich liquefied natural gas with a balance portion of said condensed overhead product stream to produce an output stream, as recited in independent claim 24. Sun is cited as remedying the deficiencies of Wilkinson with regard to splitting and mixing an input gas stream, however Applicant submits that Sun does not disclose the above-described features and steps, which are recited in the present claims. Accordingly, claims 1-3, 5, 7-12, 14-21, 24 and 25 would not have been obvious in view of Sun.

Bowen also does not cure the above-noted deficiencies of Wilkinson alone, or in combination with Sun. Bowen is drawn to using absorption oil to separate ethane plus components from LNG. Bowen involves heating the inlet LNG stream, but this does not remedy the deficiencies of Wilkinson alone, or in combination with Sun. Wilkinson is directed to the treatment of a **gaseous** feed stream whereas the present invention relates to the recovery of components from a liquid feed stream. Accordingly, there is a fundamental difference between the method and apparatus of Wilkinson and the presently claimed invention. Wilkinson is directed to the treatment of a gaseous feed stream, which received at high pressure and ambient temperature. See paragraph [0033] of Wilkinson. In contrast, the present invention is directed to an apparatus and method for recovery of **liquefied** petroleum gas or natural gas **liquids** from **liquefied natural gas**, which is received in a liquid state at cryogenic temperatures and atmospheric pressure. Because of this fundamental difference, Wilkinson does not relate to the claimed method or apparatus or **to the method of Bowen**. The disclosure of the applicant cannot be used to hunt through the prior art for the claimed elements and then combine them as claimed. *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d

1397, 1398 (Fed. Cir. 1989). Further, where a proposed modification or combination of prior art renders the prior art unsatisfactory for its intended purpose or changes the principle of operation of a reference the modification or combination would not be obvious. See MPEP 2143.01 (V) and (VI). In addition, if the proposed modification or combination of prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *See In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Because the intended purpose of Wilkinson's method and apparatus is to receive **gaseous** natural gas at ambient temperature and high pressure for processing in order to produce liquefied natural gas, it is not obvious to modify Wilkinson to heat the gaseous input stream based on Bowen. There is simply no reason to heat gaseous input gas in Wilkinson; in fact, Wilkinson discloses the ambient temperature at which the input gas is received in paragraph [0033]. Thus, clearly Wilkinson contemplated temperature and did not need a heater or heating step for the input gas. Here, it is clear that the disclosure cited in the Bowen and Sun references are the fruits of a hunt through the published art for the claimed elements in order to make a combination of references that purportedly covers those elements. As the caselaw and the MPEP portions cited above clearly state, an obviousness rejection based on such unrelated and deficient references is improper and should be withdrawn. Therefore, in view of the limitations that are not disclosed in these references, Applicant submits that the present claims would not have been obvious in view of any such combination, even if it could properly have been made.

In view of the foregoing, the Applicant respectfully submits that the independent claims patentably define the present invention over the citations of record. Further, the dependent claims should also be allowable for the same reasons as their respective base claims and further due to the additional features that they recite. Separate and individual consideration of the dependent claims is respectfully requested.

Also, the Applicant respectfully submits that one of ordinary skill would not have been motivated to combine Wilkinson with Sun and/or Bowen. The mere fact that prior art could have been modified to achieve the patent-in-suit at the time of invention does not render the invention invalid on grounds of obviousness, "unless the prior art suggests the desirability of the modification." *Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1172 (Fed. Cir. 2008) (upholding a jury instruction with that language). In order to make out a case of obviousness, the United States Patent and Trademark Office has the initial burden to make a showing that the invention as a whole would have been obvious to a person of skill in the relevant art at the time the invention was made. See M.P.E.P. §§ 2141-2142; see also *KSR* 550 U.S. 398, 405. The patent applicant is entitled to a patent unless the Office can show "that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art..." 35 U.S.C. § 103(a).

The disparate nature of the cited references suggests that those of ordinary skill in the art of recovering liquefied petroleum gas or natural gas liquids from liquefied natural gas would not have been motivated to combine the cited references. This

suggestion is buttressed by the fact that Wilkinson relates to a process for liquefying input gaseous natural gas, whereas Bowen relates to recovering ethane from inputted liquefied natural gas. Sun is totally unrelated to natural gas processing. Moreover, the base reference (Wilkinson) is not related to the present claims because it is directed to a process of liquefying gaseous natural gas. Because there is no reason to combine the prior art in the way embodied by the patent, i.e., some motivation or incentive, the present claims are unobvious. See *KSR*, 550 U.S. 398, 418 (2007). To determine whether an invention is obvious, one must ask whether a practitioner of ordinary skill would have seen the benefit of the particular combination or modification which is claimed. *Id.* at 424 (“The proper question to have asked was whether a [practitioner] of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to [the invention].”) Addressing motivation protects against the use of impermissible hindsight. *In re Kahn*, 441 F.3d at 986. Thus, a person of ordinary skill would find the disclosures of Wilkinson and Sun to be completely irrelevant to the claims of this application and not to be combinable with Bowen.

Applicant respectfully submits that the Office has not and cannot make out a case of prima facie obviousness against the independent claims of this application, or against the dependent claims, which contain all the elements of the independent claims from which they depend. The Office also cannot provide a reason why a person of skill would combine the art in the specific manner needed to achieve the claims, or a reasonable expectation of success had he done so.

In view of the foregoing, Applicant respectfully submits that the independent claims patentably define the present invention over the citations of record. Further, the dependent claims should also be allowable for the same reasons as their respective base claims and further due to the additional features that they recite. Applicant respectfully requests that the rejections be withdrawn.

Claims 4, 22, and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilkinson (U.S. Publication 2003/0005722), Sun (U.S. 6,607,597), Bowen (U.S. Publication 2003/0014995), and further in view of Keller (U.S. 2003/0005698). The Office contends that the combination of Wilkinson, Sun, and Bowen disclose parameters “discussing” operating temperatures of an input stream, cross-exchangers, and the vaporizer, but acknowledges that those ranges differ from those recited in the rejected claims. However, the Office asserts that Keller discloses a system for vaporizing LNG where the inlet temperature is -249F. Based on Keller, the Office asserts that it would have been obvious to use such temperatures in the method of Wilkinson in combination with Sun and Bowen. Applicant respectfully disagrees and traverses the rejection.

Applicant submits that Keller is directed to various ways of recovering and utilizing residual cooling from LNG to increase the capacity and efficiency of gas turbines for power production in a combined cycle as well as air chilling for the gas turbine air intake. Thus, Keller does not relate to a method, apparatus or system for the recovery of liquefied petroleum gas or natural gas liquids from liquefied natural gas. The combination of Wilkinson, Sun, and Bowen, even if it could be properly made, is deficient for at least the reasons described above with regard to independent claims 1, 17, and 24. As Keller does not and is not purported to remedy those deficiencies, Applicants submit that claim 4, which depends from claim 1, and claims 22 and 23, which depend from claim 17, are not rendered obvious by the combination of Wilkinson,

Sun, Bowen, and Keller. Thus, Applicants respectfully request that the rejection of claims 4, 22, and 23 be withdrawn for at least this reason.

Further, because the proposed modification or combination of Wilkinson, Sun, and Bowen, based on Keller would have changed the principle of operation of the prior art invention being modified, the teachings of the references are not sufficient to render the claims *prima facie* obvious. See *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Wilkinson requires inputting gaseous natural gas at ambient temperature. By modifying Wilkinson to input LNG at -249F as the Office has suggested, the principle of operation of Wilkinson is destroyed because Wilkinson sought to convert gaseous natural gas to liquefied natural gas. If a person of ordinary skill already has liquefied natural gas, then Wilkinson's method and apparatus for making liquefied natural gas are useless.

Applicant respectfully submits that one of ordinary skill would not have been motivated to combine Wilkinson, Sun, and Bowen, with each other as detailed above, or with Keller. In order to make out a case of obviousness, the United States Patent and Trademark Office has the initial burden to make a showing that the invention as a whole would have been obvious to a person of skill in the relevant art at the time the invention was made. See M.P.E.P. §§ 2141-2142; see also *KSR* 550 U.S. 398, 405. The patent applicant is entitled to a patent unless the Office can show "that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art..." 35 U.S.C. § 103(a). The disparate nature of the cited references suggests that those of ordinary skill in the art of recovering liquefied

petroleum gas or natural gas liquids from liquefied natural gas would not have been motivated to combine the cited references. This suggestion is buttressed by the fact that Wilkinson relates to a process for liquefying input gaseous natural gas, whereas Bowen relates to recovering ethane from inputted liquefied natural gas and Keller relates to producing power using the residual cooling capacity of LNG. Sun is totally unrelated to natural gas processing. Moreover, the base reference (Wilkinson) is not related to the present claims because it is directed to a process of liquefying gaseous natural gas and not to recovering liquefied petroleum gas or natural gas liquids from liquefied natural gas. Because there is no reason to combine the prior art in the way embodied by the patent, i.e., some motivation or incentive, the present claims are unobvious. See *KSR*, 550 U.S. 398, 418 (2007). To determine whether an invention is obvious, one must ask whether a practitioner of ordinary skill would have seen the benefit of the particular combination or modification which is claimed. *Id.* at 424 (“The proper question to have asked was whether a [practitioner] of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to [the invention].”) Addressing motivation protects against the use of impermissible hindsight. *In re Kahn*, 441 F.3d at 986. Thus, a person of ordinary skill would find the disclosures of Wilkinson and Sun to be completely irrelevant to the claims of this application and not to be combinable with Bowen.

Applicant respectfully submits that the Office has not and cannot make out a case of *prima facie* obviousness against the independent claims of this application, or against the dependent claims, which contain all the elements of the independent claims

from which they depend. The Office also cannot provide a reason why a person of skill would combine the art in the specific manner needed to achieve the claims, or a reasonable expectation of success had he done so.

In view of the foregoing, Applicant respectfully submits that claims 4, 22, and 23 patentably define the present invention over the citations of record. Applicant respectfully requests that the rejections be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilkinson (U.S. Publication 2003/0005722), Sun (U.S. 6,607,597), Bowen (U.S. Publication 2003/0014995), and further in view of McCartney (U.S. 6,564,579). The Office contends that the combination of Wilkinson, Sun, and Bowen disclose parameters “discussing” operating temperatures of an input stream, cross-exchangers, and the vaporizer, but acknowledges that those ranges differ from those recited in the rejected claims. However, the Office asserts that McCartney discloses the use of heat exchangers for vaporizing LNG streams and heating the streams to a range between 30F and 50F. Based on McCartney, the Office asserts that it would have been obvious to use such temperatures in the method of Wilkinson in combination with Sun and Bowen. Applicant respectfully disagrees and traverses the rejection.

Applicant submits that the combination of Wilkinson, Sun, and Bowen, even if it could be properly made, is deficient for at least the reasons described above with regard to independent claims 1, 17, and 24. As McCartney does not and is not purported to remedy those deficiencies, Applicants submit that claim 6, which depends

from claim 1, is not rendered obvious by the combination of Wilkinson, Sun, Bowen, and McCartney. Thus, Applicants respectfully request that the rejection of claim 6 be withdrawn for at least this reason.


Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilkinson (U.S. Publication 2003/0005722) and Bowen (U.S. Publication 2003/0014995), and further in view of Chen et al. (Cryogenics 2004). Applicant submits that the combination of Wilkinson and Bowen, even if it could be properly made, is deficient for at least the reasons described above with regard to independent claims 1, 17, and 24. As Chen does not and is not purported to remedy those deficiencies, Applicants submit that claim 13, which depends from claim 1, is not rendered obvious by the combination of Wilkinson, Bowen, and Chen. Thus, Applicants respectfully request that the rejection of claim 6 be withdrawn for at least this reason.

Conclusions

In view of the above remarks, Applicants believe that all of the Examiner's non-provisional rejections set forth in the March 10, 2011 Office Action have been fully overcome. Applicants, therefore, believe that the application is in condition for allowance. An indication of allowability is respectfully requested and the Examiner is invited to telephone the undersigned if it is deemed to expedite allowance of the application.

The Director is authorized to charge any fees or overpayment to Deposit Account No. 02-2135.

Respectfully submitted,

By:  _____

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